## Message

From: Janke, Robert [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25B558A57FBF45E7AAE5ECDE8D4328A0-JANKE, ROBERT]

**Sent**: 9/7/2018 4:11:48 PM

To: Murray, Regan [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=4b06d968152a4cefb83c9864ff5c89c6-Murray, Regan]

CC: Haxton, Terra [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=e76c9aaa93b24c6c86c32d636aa5303f-Baranowski, Terra]

**Subject**: FW: NOTES: Real-Time Call 9/7/18

Hi Regan,

FYI. Here are the notes (thanks to Terra) from the RT call today.

Rob

From: Haxton, Terra

Sent: Friday, September 07, 2018 10:44 AM

To: Janke, Robert < Janke. Robert@epa.gov >; Haxton, Terra < Haxton. Terra@epa.gov >

Subject: NOTES: Real-Time Call 9/7/18

Real-time Call Notes from 9/7/18 Jim, Sam, Rob, Terra

Jim - Has been forward/backward with Henderson stuff - still don't have dashboard for inactivation - have generated some new LINK dashboards - need to generate the data streams live - ideally have something done by Monday - have a use case for it, so hoping for it

Sam working on Flint – influxDB has all Flint WQ, Grafana has looping application – runs query for pipes for last 24 hours for water age – influxDB is good for queries for 20 years of data and averaging a single time-series – however not good at 10,000 entries with 3 values each – have problems with this – talked to influxDB and they are working on cacheing layer – we are working on our own that precomputes the queries to serve them up – there are transfer bottlenecks and data translations – this takes about the same amount of time as waiting for influxDB to do its own querying – have reconfig the cacheing layer as streaming process – starting download timeseries from influx and as soon as pipe data comes in we start translating it and resending back to influx and influx is downloading the next set of data – sort of piecewise computation rather than batch computation – about ready to test them – hopefully better to display data on map – when do you think you'll be testing this, maybe be ready on Monday (9/10/18), need to update docker – once you implement this will I be able to pull up water age map for Flint – Yes (Sam) we are testing this in the staging dashboard – this component is open-source, Grafana hosted, middleware that is needed – what is Jim's use case for Monday, going to Singapore all next week, sales thing for Visenti

(https://www.visenti.com/?\_ga=2.131229327.1605603291.1536328840-851414792.1534180708) to sell their products in America, have a discussion there with Visenti and PUB

Have you heard back from Rob Bensick, Flint yet? No, haven't, but will try to call today.

Haven't gotten back with Abdul about East Chicago yet. November 13-14<sup>th</sup> timeframe is still good. Will email him today and hopefully we can move forward with the visit

Tech brief – navigating this through clearance system – hope to have it finalized really soon – only issue is dashboard to make them prettier, up-to-date, and working – would be helpful to talk with Rob B. and get his interest – keep me posted with an email when it is working – will try to go and look at it – update the brief

accordingly – we'll see how to proceed with Rob – AWWA journal paper, still need to capture the flow errors – will follow-up after next week about this – finalizing this for internal system, then try to engage Flint and others in technology, taking tech brief to make AWWA journal article, will engage on this – This will serve as our Flint public deliverable – An EPA report on Flint calibration will take a little more effort. Would prefer to get Rob B. to embrace technologies prior to putting in the effort to develop an EPA report on the model calibration and model accuracy assessment. It would seem that we could get more value out of advertising the technologies that were deployed and being used at Flint. Would prefer to work on AWWA Opflow paper on Henderson or East Chicago application if we cannot engage Rob B and Flint to embrace these technologies.

Rob J. seeing more interest in real-time modeling on ResearchGate – There seems to be a recognition that better models and real-time are needed. It would help if we had more journal articles. Jim starting prepping on model calibration, demand estimation online – looking at research in this area (Dragon Savic, ?? out of Germany, Mario P from Cyprus – these all have references in them) – we are in the lead in the software area, but not the lead in technology since the Europeans have more publications

No word on Lexington

EPANET special interest meeting – got email from Regan August 31 – we've talked about this – going to have our next meeting on the logistics

Would be good to engage with SNL about the testing – regression testing – relax tolerance for one benchmarks, right now have separate benchmarks for Win64, Linux64, etc.,

----Original Appointment----

From: Janke, Robert

Sent: Thursday, September 6, 2018 2:42 PM

To: Janke, Robert; jim uber; sam@citilogics.com; Murray, Regan; Haxton, Terra

**Subject:** Real-Time Call

When: Friday, September 7, 2018 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Teleconference

Hi All,

Here is a calendar invite for our teleconference tomorrow. Here is Regan's conferencing number.

Conference phone number:	
Conference ID:	Personal Phone / Ex. 6

Thanks!

Rob